

REMARKS / ARGUMENTS

Claims 1-33 are pending in the instant application. Claims 1, 11 and 21 have been amended to clarify the claim language. Claims 1, 11 and 21 are independent claims. Claims 2-10, 12-20, and 22-30 depend directly or indirectly from claims 1, 11 and 21, respectively.

Claims 1, 11 and 21 are rejected under 35 U.S.C. §103(a) as being unpatentable over USPP Cromer 2004/0223462 ("Cromer") in view of Applicant admitted prior art (APA).

Claims 2-5, 7-10, 12-15, 17-20, 22-25, 27-30 stand rejected under 35 U.S.C. §103(a) based on Cromer and APA in view of USP 5,923,663 ("Bontemps").

Claims 31-33 are allowed.

The Applicant respectfully traverses these rejections at least for the reasons previously set forth during prosecution and at least based on the following remarks.

I. REJECTIONS UNDER 35 U.S.C. § 103

In order for a *prima facie* case of obviousness to be established, the Manual of Patent Examining Procedure, Rev. 6, Sep. 2007 ("MPEP") states the following:

The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396 (2007) noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Federal Circuit has stated that "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness."

See the MPEP at § 2142, citing *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006), and *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d at 1396 (quoting Federal Circuit statement with approval). Further, MPEP § 2143.01 states that "the mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art" (citing *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396 (2007)). Additionally, if a *prima facie* case of obviousness is not established, the Applicant is under no obligation to submit evidence of nonobviousness:

The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.

See MPEP at § 2142.

A. The Proposed Combination of Cromer and APA Does Not Render Claims 1, 11 and 21 Unpatentable

The Applicant now turns to the rejection of independent claims 1, 11 and 21 under 35 U.S.C. 103(a) as being unpatentable by the combination of Cromer and

APA.

A(1). Independent Claims 1, 11 and 21

With regard to the rejection of independent claim 1 under 35 U.S.C. §102(b), the Applicant submits that APA does not disclose or suggest at least the limitation of “determining any one usable media pair from at least three media pairs of all existing media pairs,” as recited in Applicant’s claim 1. The Office Action states the following:

The Final Office Action states the following:

“Regarding Claims 1, 11, and 21 Cromer et al. discloses a method for providing and configuring communication links, the method comprising: **determining** anyone usable media pair from **all existing media pairs** (see [0023], lines the NIC finds a functional signal wires in media) : wherein **the device communicates using at least three media pairs of said all existing media pairs** (see figure 3, see[0032], the 4 pair media device)”

See the Office Action at page 2 (emphasis added). The Examiner relies for support on Cromer ¶[0023 to disclose the following:

“...processor 130 generates processor signals that are provided to the wires in media 103 through the intervening MIFU 138. The signals produced on media 103 reflect the correspondence between the processor signals, the signals output from MIFU 138, and physical media signal wires. **If a device 102 within the system determines that its connection is non-functional, NIC 120 may logically re-route its outputs by altering the correspondence between the processor signals and physical media wires.** If NIC 120 is able to find a minimum number of functional signal wires in media 103, NIC 120 may reroute the signals it produces to the functional signal wires thereby enabling the system to continue

operation, even if at a reduced data rate."

See Cromer at ¶0023 (emphasis added). The Applicant points out that Cromer merely discloses an auto-negotiation system using a signal output from the MIFU 138 to detect whether the connections to the physical media wires are functional or not. If not, the NIC 120 may logically reroute the outputs by altering the corresponding processor signals and input physical media wires. Cromer, however, does not disclose that the processor signals "determines any one usable pairs from at least three media pairs of all existing media pairs," as recited in Applicant's claim 1. For example, Cromer states the following:

"MIFU 138 converts the information received from the GMII into signals suitable for transmission over media 103. In one implementation for Gigabit Ethernet, MIFU 138 employs four-dimensional Pulse Amplitude Modulation 5 (4D-PAM-5) encoding. **The fundamental difference in the operation of 10/100 Mbps Ethernet and Gigabit Ethernet is that Gigabit operation uses all four twisted pairs, transmitting and receiving simultaneously on all four pairs where 10/100 Mbps uses only two pairs, one dedicated for transmitting and one dedicated for receiving.**"

See Cromer at ¶0023 (emphasis added). Cromer discloses that the MIFU converts GMII signals (Gigabit Ethernet signals) for transmission over media 103 (10/100 Mbps signals). Cromer further discloses that the 10/100 Mbps uses only two pairs, one dedicated for transmitting and one dedicated for receiving. In this regard, Cromer's Fig. 3, although disclosing 4 pairs of media wires at the input, the MIFU only determines two functional pairs for transmission. The Examiner is further referred to the following citation of Cromer:

"Because Auto-negotiation was originally specified for 100 Mbps adapters that may have been installed on 2 pair cabling systems, the FLP signals are restricted to 2-pairs of wires even on systems (such as Gigabit systems) employing 4 pair cabling. If one of the four wires in the 2 pairs used to send the FLP signals is non-functional (open, shorted to ground, shorted to Vdd, and so forth), the Auto-negotiation will not complete successfully. To detect and respond to this condition, the depicted embodiment of the present invention monitors for a timeout condition (block 174) after initiating the Auto-negotiation sequence. If a time out is detected in block 174, it is assumed that one of the four original FLP wires is non-functional."

See Cromer at ¶0031 (emphasis added). Cromer, in the above citation, clearly discloses that the Fast Link Pulse (FLP) signals are restricted to 2-pairs of wires, even on a Gigabit systems, that employ 4 pair cabling. In this regard, Cromer discloses that the detection (the alleged determination of usable pairs) are limited to only 2-pairs, and not **"at least three media pairs of all existing media pairs,"** as recited in Applicant's claim 1. AAPA does not overcome Cromer's above deficiencies.

Likewise, independent claims 11 and 21 are similar in many respects to claim 1, and are, submitted to be allowable based on the rationale of claim 1.

The Applicant also reserves the right to argue additional reasons beyond those set forth above to support the allowability of claims 1, 11 and 21.

B. The Proposed Combination of Cromer, APA and Bontemps Does Not Render Claims 2-5, 7-10, 12-15, 17-20, 22-25, 27-30 Unpatentable

Claims 2-5, 7-10, 12-15, 17-20, 22-25, 27-30 are rejected under 35 U.S.C. §103(a) over Cromer and APA, in view of Bontemps.

Based on at least the foregoing, the Applicant believes the rejection of independent claims 1, 11 and 21 under 35 U.S.C. § 103(a) as being unpatentable by the combination of Cromer and APA has been overcome, and requests that the rejection be withdrawn. Additionally, claims 2-5, 7-10, 12-15, 17-20, 22-25, 27-30 depend from independent claims 1, 11 and 21, respectively, and are, consequently, also respectfully submitted to be allowable. The Applicant also maintains the arguments stated in the 10/31/08 reply to the Office Action, with regard to the above claims.

In addition, with regards to claims 2, 12, and 22, the applicant points out that the amendments "a corresponding second device with at least three media pairs" overcomes the combination of Cromer, APA and Bontemps, which disclose only two media pairs. Claims 2, 12, and 22 are therefore submitted to be allowable.

Likewise, claims 3, 13, and 23 are submitted to be allowable based on dependency on claims 2, 12 and 23.

Applicant also reserves the right to argue additional reasons beyond those set forth above to support the allowability of claims 1-5, 7-15, 17-25 and 27-30.

Application No. 10/612,025
Reply to Office Action of April 13, 2009

II. Allowed Claims 31-33

Claims 31-33 have been allowed by the Examiner (see page 9 at the Office Action).

CONCLUSION

Based on at least the foregoing, the Applicant believes that all claims 1-5, 7-15, 17-25 and 27-33 are in condition for allowance. If the Examiner disagrees, the Applicant respectfully requests a telephone interview, and request that the Examiner telephone the undersigned Patent Agent at (312) 775-8093.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to the deposit account of McAndrews, Held & Malloy, Ltd., Account No. 13-0017.

A Notice of Allowability is courteously solicited.

Respectfully submitted,

Date: July 13, 2009

/ Frankie W. Wong /

Frankie W. Wong
Registration No. 61,832
Patent Agent for Applicant

McAndrews, Held & Malloy, Ltd.
500 West Madison Street, 34th Floor
Chicago, Illinois 60661
(312) 775-8093 (FWW)